HAZARDOUS WASTE

The Resource Conservation and Recovery Act, a federal law, provides for regulation of treatment, storage, and disposal of hazardous and mixed wastes. The federal Environmental Protection Agency is responsible for implementing RCRA, and gives authorization to individual states to operate RCRA programs. Idaho has RCRA authorization, so the Department of Environmental Quality runs a state hazardous waste regulatory program.

Some facilities at the INEEL are inspected at least once a year. If violations are found, a Notice of Violation is issued, and a Consent Order negotiated. That's been standard operating procedure since Idaho gained the authority to run a state RCRA program in 1989. But in June 2000 the Department and INEEL tried a new approach.

Called a Voluntary Consent Order, it was an agreement made without a notice of violation being issued or fines levied. DEQ has used VCOs to address problems that were voluntarily disclosed by regulated parties.

INEEL generates more hazardous waste, several times over, than the rest of the state combined. Could the process that had worked for smaller, narrowly focused problems work at INEEL? DEQ decided to find out.

It took four years to negotiate the Voluntary Consent Order. It's an important agreement, with wide-ranging implications as significant as those in the first RCRA agreement between the state and INEEL. The agreement focuses on tanks, with an important provision relating to identifying wastes that are hazardous.

A note about what a "tank" is may be in order. A tank is a non-moving structure used for storage. It may hold 5 gallons or 500,000 gallons, and the tanks covered in this agreement run the gamut. Historically, tanks have been a high risk for releases to the environment. They can be big, they sit on or under the ground, it's difficult to get inside of them to see if they are in good shape, and some hold so much stuff small amounts can leak over time without anyone noticing. That's what happened with some tanks at the INEEL, and that's what this agreement seeks to avoid. Here's a look at the provisions of the agreement:

- **Identifying wastes which are hazardous**: each Notice of Violation the site has received included several citations for "failure to characterize." That means that wastes that were hazardous were not

Some tanks aren't easy to see from the surface. This is an entry portal to an underground tank at the Power Burst facility.

Tank containing uncharacterized (untested) waste in the Test Reactor Area "boxyard," an area used for storage of radioactive materials.

Another tank containing uncharacterized waste at the TRA boxyard.

The agreement covers tanks that are above and under ground. This above-ground tank is an open top tank.

Identification label on a container of hazardous waste. INEEL has been cited for failing to test some wastes to determine if they are hazardous. In the voluntary consent order, it agreed to develop measures to prevent this from happening.

Empty sulfuric acid tanks awaiting disposal.

Test Reactor Area. The plywood covers holes cut in each tank so sludge could be removed.

This tank at the Central Facilities area was used to hold mercury-contaminated water.

This tank at PBF holds a non-hazardous waste.

identified and managed as such. Site managers agreed to put measures in place to ensure this doesn't occur.

- **The undiscovered tanks**: INEEL told DEQ about 44 hazardous waste tanks DEQ had not known of. These tanks, all located at INTEC, must now be marked. A regulatory determination must be made for each: does it meet the definition of a "tank"? For those that do, INEEL has a deadline by which it must decide whether to close each tank or work with DEQ to get an appropriate permit.
- **The mystery tanks**: INEEL told DEQ about 720 tanks whose contents were not identified. These tanks are all over the site. Some are empty, others hold hazardous waste, and others hold a non-hazardous waste. Under the VCO agreement, the contents of each tank must be sampled and identified. This process is expected to take at least seven years.
- **Tank farm tanks**: about a hundred tanks or components at INTEC were identified as part of the tank farm system. To avoid duplication of effort and confusion, it was agreed that these tanks would be closed as part of the large-scale effort that had been agreed to in a consent order signed in 1992.

"Although DEQ and INEEL now have a lot of work to do, it would have taken us many years to find all of the problems the INEEL voluntarily disclosed. We've managed to find some shared goals and are using this agreement to try to meet them," says DEQ's Brian Monson

What happened in 1996?

The chart on the next page shows a significant increase in generation and treatment of hazardous and mixed waste in 1996. Much of the hazardous waste contributing to the increase was contaminated wastewater that was generated from equipment that de-ionized water. This waste stream wasn't new in 1996; it simply hadn't been counted as hazardous waste prior to that year.

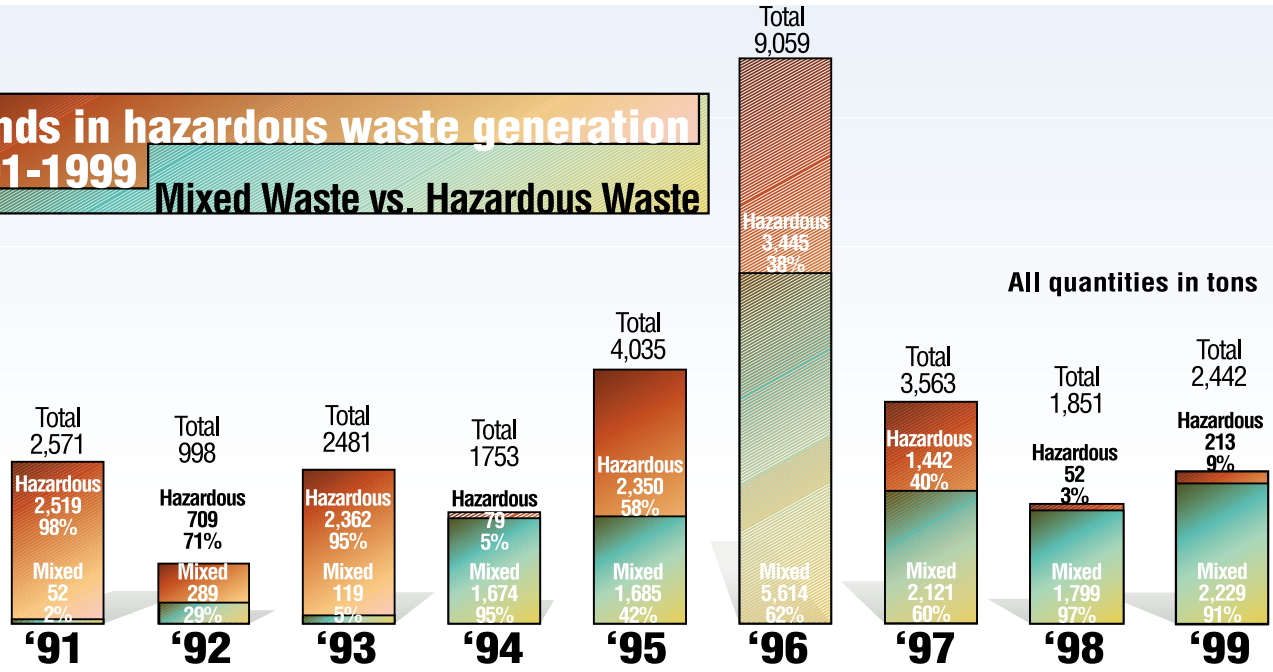
The contaminated water was treated the same year it was generated, which accounts for the spike in the treatment graph as well. This waste isn't apparent in 1997 because a new method of de-ionizing water, which eliminated the waste stream, was used in 1997.

Most of the mixed waste was generated by waste treatment at INTEC. The Process Equipment Waste Evaporator and the High-Level Waste Evaporator generated about 5,145.5 tons of mixed waste. This accounts for nearly 92 percent of the mixed waste generated at the INEEL in 1996. These two pieces of equipment treated 5,692 tons of mixed waste; 53% of the waste (mixed and hazardous) treated in 1996.

Trends in hazardous waste generation 1991-1999

Mixed Waste vs. Hazardous Waste

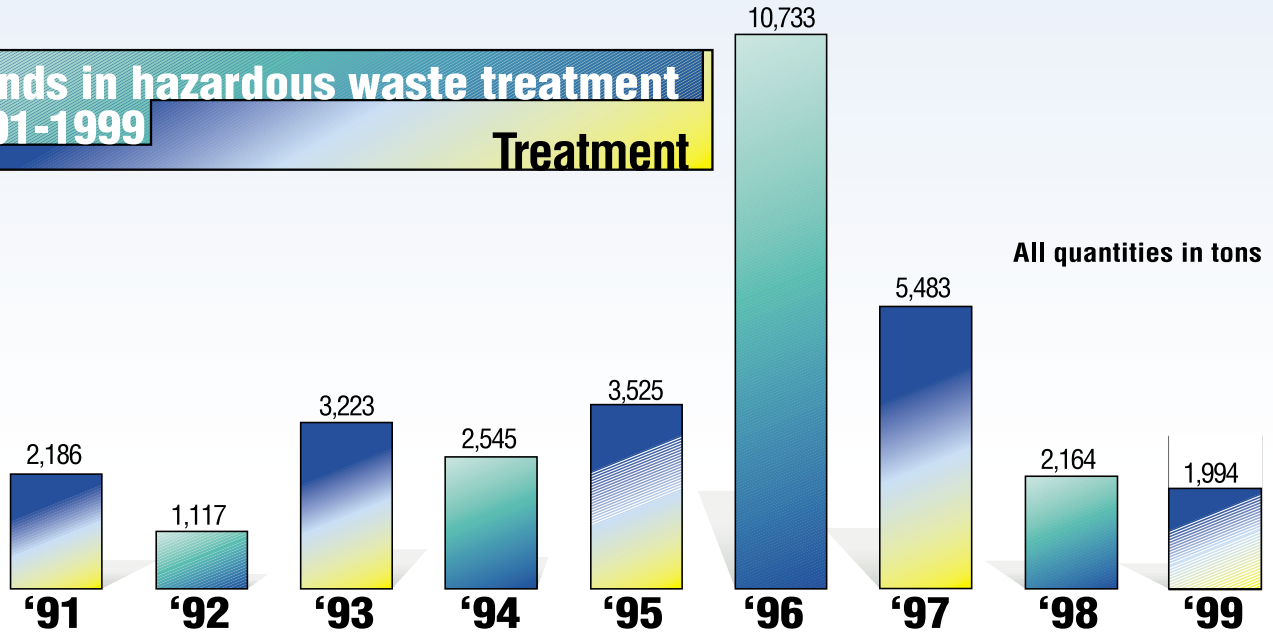
All quantities in tons



Trends in hazardous waste treatment 1991-1999

Treatment

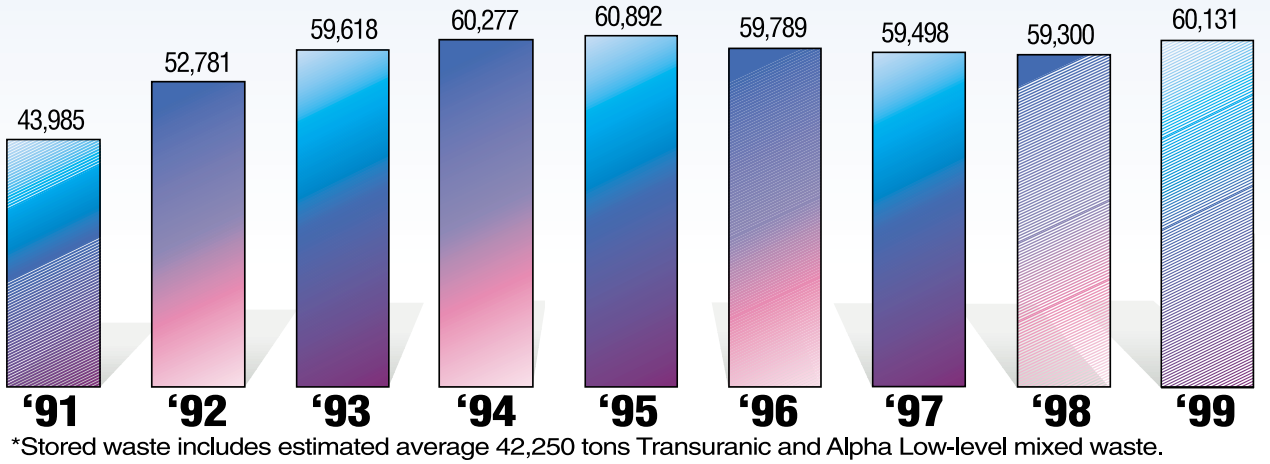
All quantities in tons



Trends in hazardous waste storage 1991-1999

Storage

All quantities in tons



*Stored waste includes estimated average 42,250 tons Transuranic and Alpha Low-level mixed waste. Information not available for 1990.